

AMENDMENTS TO THE CLAIMS

1- 17. (Canceled)

18. (Currently amended) An apparatus for removing an anti-noncollagenous domain of collagen (NC1) antibody and NC1 from blood, comprising:

an affinity column wherein an anti NC1 monoclonal antibody that exhibits substantially more binding to glomeruli of macaques in which nephritis has been induced by anti-GBM antibody than to glomeruli of normal macaques is immobilized for dialyzing blood to remove NC1 in the blood; and

an affinity column wherein ~~an~~ the NC1 is immobilized for dialyzing the blood to remove anti NC1 antibody in the blood, wherein the NC1 is able to bind the anti NC1 monoclonal antibody.

19. (Previously presented) A method for removing an anti NC1 antibody and NC1 from blood, comprising the steps of:

providing the apparatus of claim 18;

dialyzing blood obtained from a subject having symptoms of nephritis to remove NC1 in the blood by passing the blood through the anti NC1 monoclonal antibody-immobilized affinity column;

further dialyzing the blood to remove anti NC1 antibody in the blood by passing the blood through the NC1-immobilized affinity column; and

recycling the blood from which the NC1 and the anti NC1 antibody are removed into an internal circulation of the body.

20. (Currently amended) The method according to claim 19, wherein the subject has symptoms of anti glomerular basement membrane (GBM) antibody nephritis.

21. (Currently amended) A method of identifying presence of nephritis in a mammal at an early stage before formation of glomerular crescent, comprising:

- obtaining a biological sample from the mammal;

- exposing the sample to anti-noncollagenous domain of type IV collagen (NC1) monoclonal antibody, wherein said antibody exhibits substantially more binding to glomeruli of macaques in which nephritis has been induced by anti-GBM antibody than to glomeruli of normal macaques; and

- identifying binding of the antibody to antigen present in the sample, wherein significant binding indicates presence of nephritis in the mammal.

22. (Canceled)

23. (Previously presented) The method according to claim 21, wherein said biological sample is urine.

24. (Previously presented) The method according to claim 21, wherein said biological sample is serum.

25. (Currently amended) The method according to claim 21, wherein said biological sample is ~~derived~~ sectioned from frozen kidney tissue.

26. (Previously presented) The method according to claim 21, wherein identifying binding of the antibody comprises an immune reaction assay.

27. (Previously presented) The method according to claim 21, wherein identifying binding of the antibody comprises an Enzyme-Linked ImmunoSorbent Assay (ELISA) assay.

28. (Currently amended) The method according to claim 21, wherein identifying binding of the antibody comprises an assay selected from the group consisting of an avidin-biotin (AB) method, a ~~radio-labeled compound~~ radioimmunoassay (RIA) method, an immunoluminescence method, a precipitation method, and an agglutination method.

29. (Previously presented) The method according to claim 21, wherein identifying binding of the antibody comprises immunofluorescent staining.

30. (Previously presented) The method according to claim 21, wherein the presence of nephritis is identified before granular deposition of IgA into renal glomerular basement membrane (GBM) of the mammal.

31. (Previously presented) The method according to claim 21, wherein the presence of nephritis is identified before formation of glomerular crescent in the mammal.

32. (New) A method of identifying presence of nephritis in a mammal, comprising:

- obtaining a biological sample from the mammal, wherein said sample is a frozen kidney tissue of the mammal;

- exposing the sample to anti-noncollagenous domain of type IV collagen (NC1) monoclonal antibody, wherein said antibody is configured to have a substantially higher affinity to a sample under condition of nephritis than a normal sample;

- identifying binding of the antibody to antigen present in the sample, wherein significant binding indicates presence of nephritis in the mammal,

wherein said method is configured to identify presence of nephritis at an early stage, said stage being before formation of glomerular crescent.

33. (New) A method of identifying presence of nephritis in a mammal, comprising:

- obtaining a biological sample from the mammal, wherein said sample is a frozen kidney tissue of the mammal;

- exposing the sample to anti-noncollagenous domain of type IV collagen (NC1) monoclonal antibody, said antibody selected from the following immunohistochemical procedure comprising obtaining a biological sample that is sectioned from frozen kidney tissue of a mammal and is not denatures with urea; and selecting an anti-noncollagenous domain of type IV collagen (NC1) monoclonal antibody that binds to a sample under condition of nephritis but not to a normal sample;

- identifying binding of the antibody to antigen present in the sample, wherein significant binding indicates presence of nephritis in the mammal,

wherein said method is configured to identify presence of nephritis at an early stage, said stage being before formation of glomerular crescent.